2x4 DVI-HD Audio/Video Matrix KVMP Switch

CM0264

User Manual

www.aten.com

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna;
- Increase the separation between the equipment and receiver;
- Connect the equipment into an outlet on a circuit different from that which the receiver is connected;
- Consult the dealer/an experienced radio/television technician for help.

RoHS

This product is RoHS compliant.

SJ/T 11364-2006

The following contains information that relates to China.

部件名称	有毒有害物质或元素					
	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
电器部件	●	○	○	○	○	○
机构部件	○	○	○	○	○	○

○: 表示该有毒有害物质在该部件所有均质材料中的含量均在SJ/T 11363-2006规定的限量要求之下。

●: 表示符合欧盟的豁免条款，但该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T 11363-2006的限量要求。

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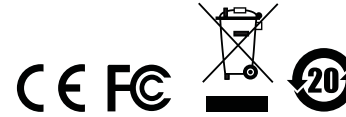

User Information

Online Registration

Be sure to register your product at our online support center:

International	http://support.aten.com
North America	http://www.aten-usa.com/product_registration

Telephone Support

For telephone support, call this number:

International	886-2-8692-6959
China	86-10-5255-0110
Japan	81-3-5615-5811
Korea	82-2-467-6789
North America	1-888-999-ATEN ext 4988
United Kingdom	44-8-4481-58923

User Notice

- All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed *as is*. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

  The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

  The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

- The CM0264 provides free Open Source software. For further details, please go to http://www.aten.com/opensource

Package Contents

The CM0264 package consists of:

- 1 CM0264 2x4 DVI-HD Audio/Video Matrix KVMP Switch
- 2 Custom HD audio/video KVM Cable Sets
- 2 Custom DVI-D KVM Cable Sets
- 1 Power Adapter
- 1 USB-to-PS/2 Converter
- 1 Foot Pad Set (4 pcs)
- 1 User Instructions*

Check to make sure that all the components are present and that nothing got damaged in shipping. If you encounter a problem, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the unit, and/or any of the devices connected to it.

***** Features may have been added to the CM0264 since this manual was printed. Please visit our website to download the most up-to-date version.

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About this Manual

This User Manual is provided to help you get the most from your system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

Chapter 1, Introduction, introduces you to the CM0264 system. Its purpose, features and benefits are presented, and its front and back panel components are described.

Chapter 2, Hardware Setup, describes how to set up your installation. Diagrams showing the necessary steps are provided.

Chapter 3, Basic Operation, explains the fundamental concepts involved in operating the CM0264.

Chapter 4, Keyboard Port Operation, details all of the concepts and procedures involved in the Hotkey operation of your CM0264 installation.

Chapter 5, GUI Operation, provides a complete description of the CM0264's Graphical User Interface (GUI), and how to work with it.

Chapter 6, The Firmware Upgrade Utility, explains how to upgrade the CM0264's firmware with the latest available versions.

An Appendix, provides specifications and other technical information regarding the CM0264.

Conventions

This manual uses the following conventions:

Monospaced	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, and then select *Run*.
⚠	Indicates critical information.

Product Information

For information about all ATEN products and how they can help you connect without limits, visit ATEN on the Web or contact an ATEN Authorized Reseller. Visit ATEN on the Web for a list of locations and telephone numbers:

International	http://www.aten.com
North America	http://www.aten-usa.com

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Chapter 1
Introduction

Overview

The CM0264 2x4 DVI-HD Audio/Video Matrix KVMP Switch charts a revolutionary new direction in KVM switch functionality by combining a 2-port HD audio/video KVM switch and a 2-port DVI KVM switch with a 2-port USB 2.0 hub in a dual display console setup with a Graphical User Interface (GUI) and a range of innovative desktop control features.

The CM0264 2x4 DVI-HD Audio/Video Matrix KVMP Switch's Dual Display Console supports one DVI display and one HD audio/video display, allowing users to access 4 computers/devices from a single console, consisting of USB keyboard, USB mouse, and one or two displays. As USB hub, it permits each computer to access connected peripherals on a one-computer-at-a-time basis.

As a matrix switch, the CM0264 enables effortless switching between two DVI sources and two HD audio/video sources via hotkeys, pushbuttons, mouse, and GUI. In addition, with support for two console displays, the CM0264 offers 3n1 picture-in-picture view mode that allows you to monitor up to four computers simultaneously. Further innovative desktop control features include on-screen file transfer and copy-paste functionality, as well as Cursor Shift port switching in dual-display mode.

Recognizing the increased importance of digital audio, the CM0264's two HD audio/video interfaces integrate multi-channel audio support that allows users to experience high-definition audio such as Dolby True HD and DTS HD Master Audio. Furthermore, a single microphone can provide audio input to each of the computers, and you can listen to the audio output of each computer on a single set of speakers (on a one-at-a-time basis). As with the USB peripherals, the audio focus can be independent of the KVM focus.

With its unique design and innovative features, the CubiQ CM0264 2x4 DVI-HD Audio/Video Matrix KVMP Switch provides both style and functionality for the SOHO environment. Allowing you to switch seamlessly between two HD audio/video- and two DVI-enabled PCs, and share USB peripherals and high-definition audio from a dual-display console, the CM0264 is ideal for multimedia applications, and offers the ultimate in space-saving, streamlined KVM technology for the desktop.

Features

- 4-port 2x4 DVI-HD Audio/Video Matrix KVMP Switch
- One Dual Display USB console independently and simultaneously controls two DVI computers, two HD audio/video computers or devices, and two additional USB devices
- Dual Display Console supports two displays – one DVI display and one HD audio/video display
- Graphical User Interface (GUI) for convenient, user-friendly operation
- File system management utility – transfer files between PCs
- 2-port USB 2.0 hub built in; fully compliant with USB 2.0 specification
- Independent switching of KVM, USB peripheral, and audio focus
- Computer selection via front panel pushbuttons, hotkeys, mouse, and GUI
- Dolby True HD and DTS HD Master Audio support
- Superior video quality – up to 1920 x 1200 (DVI Single Link), 1080p (HD audio/video)
- Supports widescreen resolutions
- Multiplatform support – Windows 2000/XP/Vista/7, Linux, and Mac
- Console mouse port emulation/bypass feature supports most mouse drivers and multifunction mice
- Cursor Shift Function – in dual-display mode, the mouse cursor can move back and forth across both displays, shifting the KVM focus
- Video DynaSync™ – Exclusive ATEN technology eliminates boot-up display problems and optimizes resolution when switching between ports
- Power on detection – if one of the computers is powered off, the CM0264 automatically switches to the next powered-on computer
- Console keyboard port emulation/bypass feature supports most gaming/multimedia keyboards
- Complete keyboard emulation for error-free booting
- Mac keyboard support and emulation*
- Auto Scan Mode for monitoring all computers and HD audio/video devices
- Firmware Upgradable

***** 1. PC keyboard combinations emulate Mac keyboards.

2. Mac keyboards only work with their own computers

Requirements

Console

- A HD audio/video display capable of the highest possible resolution
- A DVI Single Link display capable of the highest possible resolution
- A USB mouse
- A USB keyboard

Note: A PS/2 keyboard and mouse can be used with the converter included in the CM0264 package.

- Microphone and speakers (optional)

Computers

The following must be available on each computer:

- A HD audio/video port or DVI port

Note: The quality of the display is affected by the quality of the display card. We recommend you purchase a high quality product.

- USB Type A port
- Audio ports (optional)

Hardware

- 2.0Ghz processor
- 1GB RAM

Cables

Two custom DVI-D Single Link KVM cable sets and two custom HD audio/video KVM cable sets are provided with this package.

Converters

The following optional converters are available for the CM0264:

Converter	Part Number
HD audio/video (F) to DVI (M) Converter	2A-127G
HD audio/video (M) to DVI (F) Converter	2A-128G

Operating Systems

Supported operating systems are shown in the tables, below:

CM0264

OS		Version
Windows		2000 and higher
Linux	RedHat	6.0 and higher
	SuSE	8.2 and higher
UNIX	FreeBSD	3.51 and higher
Novell	Netware	6.0 and higher
Mac		OS 9 and higher

CM0264 Graphical User Interface (GUI)

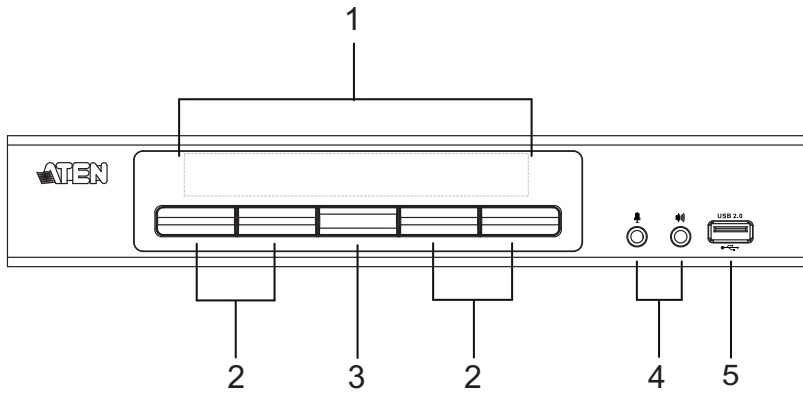
OS	Version
Windows	XP, 2003, 2008, Vista x86/x64, Windows 7 x86/x64

Graphical User Interface (GUI) Language

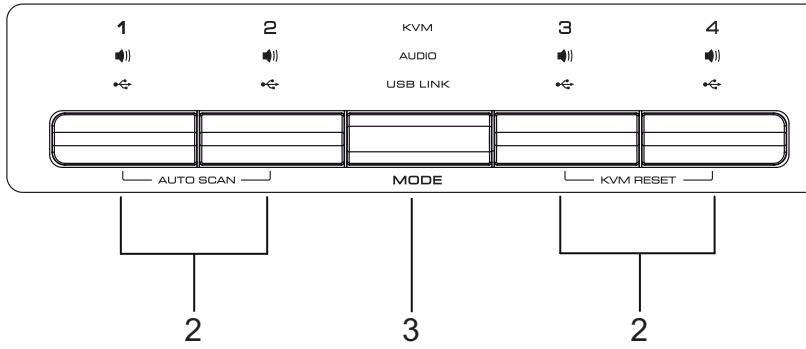
The CM0264's GUI is in English.

Components

Front View

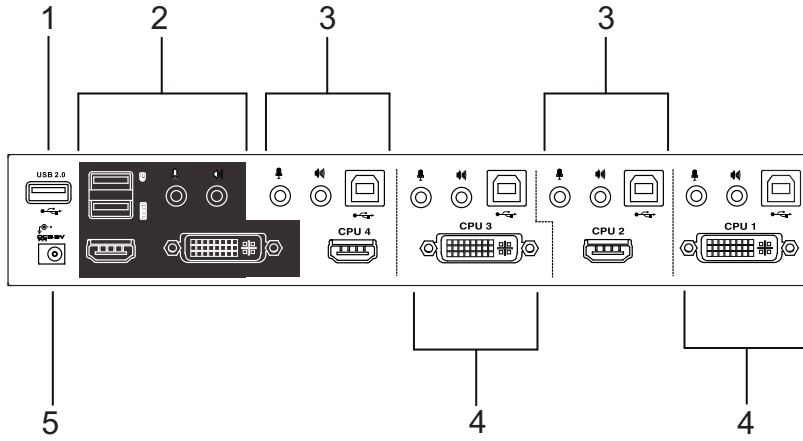


LED Status Panel Detail



No.	Component	Description
1	LED Status Panel	This panel contains LED icons that light to indicate mode and port status. The Mode and Port Selection Pushbuttons each have three corresponding LED icons that represent **audio**, **KVM1/V2**, and **USB** status. See *LED Display*, page 14, for full details.
2	Port Selection Pushbuttons	◆ Press the Port Selection Pushbuttons to manually switch ports. See *Manual Switching*, page 15, for full details. ◆ Press and hold Port Selection Pushbuttons 1 and 2 simultaneously for *2 seconds* to start Auto Scan Mode. See *Going Directly to a Port*, page 24, for full details. ◆ Press and hold Port Selection Pushbuttons 3 and 4 simultaneously for *2 seconds* to execute a KVM reset. See *KVM Reset*, page 19 for full details.
3	Mode Selection Pushbutton	◆ This pushbutton allows you to cycle through the three modes of focus – KVM1/V2, audio, and USB. ◆ Press and hold Mode Selection Pushbutton before powering on the CM0264 to enter Firmware Upgrade Mode. See *Starting the Upgrade*, page 49 for full details.
4	Console Audio Ports	Your speakers and microphone plug in here.
5	USB 2.0 Peripheral Port	USB 2.0 peripherals (printers, scanners, etc.) plug into this port.

Rear View



No.	Component	Description
1	USB 2.0 Peripheral Port	USB 2.0 peripherals (printers, scanners, etc.) can plug into this port.
2	Console Port Section	The cables from your USB keyboard, USB mouse, DVI console display, HD audio/video console display, microphone and speakers plug into this section.
3	HD audio/video KVM Port Section	The cables that link the CM0264 to your HD audio/ video computers / devices plug in here. Each HD audio/video KVM port is comprised of a microphone jack, speaker jack, USB type B socket, and an HD audio/video connector.
4	DVI KVM Port Section	The cables that link the CM0264 to your DVI Single Link computers plug in here. Each DVI KVM port is comprised of a microphone jack, speaker jack, USB type B socket, and a DVI-I Single Link connector.
5	Power Jack	The power adapter cable plugs into this jack.

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Chapter 2
Hardware Setup

1. Important safety information regarding the placement of this device is provided on page 55. Please review it before proceeding.
2. Make sure that the power to all devices connected to the installation is turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

Cable Connection

To set up your CM0264 installation, refer to the installation diagram on page 11 (the numbers in the diagrams correspond to the steps, below), and do the following:

1. Plug your USB keyboard and USB mouse into the USB Console Ports located on the unit's rear panel.
2. Plug your DVI display into the Console DVI-I Single Link Port located on the unit's rear panel.
3. Plug your HD audio/video display into the Console HD audio/video Port located on the unit's rear panel.
4. If you are using an IP phone headset or separate microphone and speakers, plug them into the analog audio ports on the unit's front panel. These audio ports have priority over those on the rear panel.
5. If you are using separate speakers and microphone, plug them into the console analog audio ports on the unit's rear panel.
6. Using the custom DVI KVM cable set, plug the DVI-D Single Link cable connector and the accompanying USB and audio connectors their corresponding sockets on the rear of the switch.
7. At the other end of the cable, plug the DVI and USB cables into their respective ports on the computer(s) that is(are) the source of DVI content.

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8. Using the custom HD audio/video KVM cable set, plug the HD audio/video cable connectors and accompanying USB and audio connectors (if required) into their corresponding sockets on the rear of the switch.

   Note: If the HD audio/video console display has built-in speakers and supports audio through its HD audio/video interface, there is no need to use the speaker connectors on the custom HD audio/video KVM cable sets.

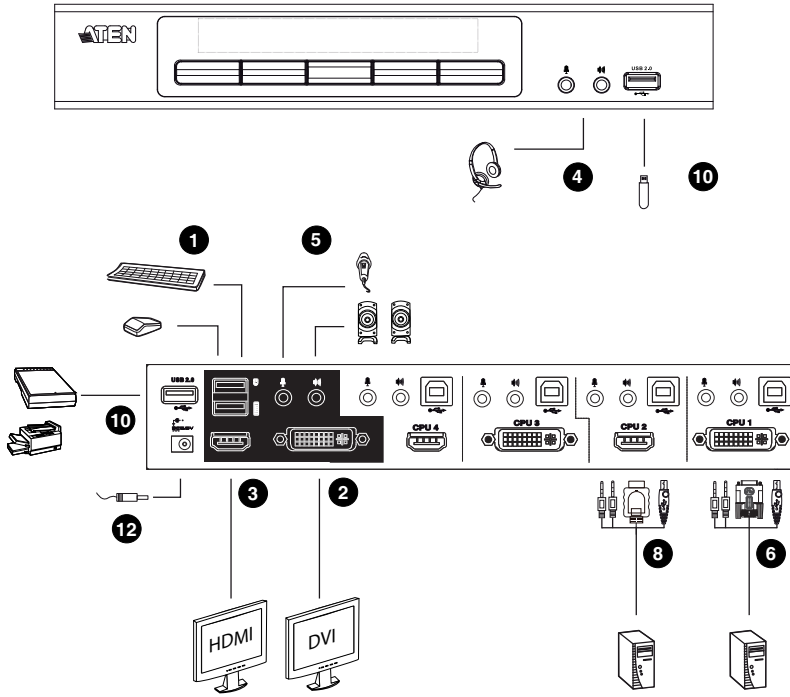
9. At the other end of the cable, plug the HD audio/video and USB cables into their respective ports on the computer(s)/device(s) that is (are) the source of HD audio/video content.

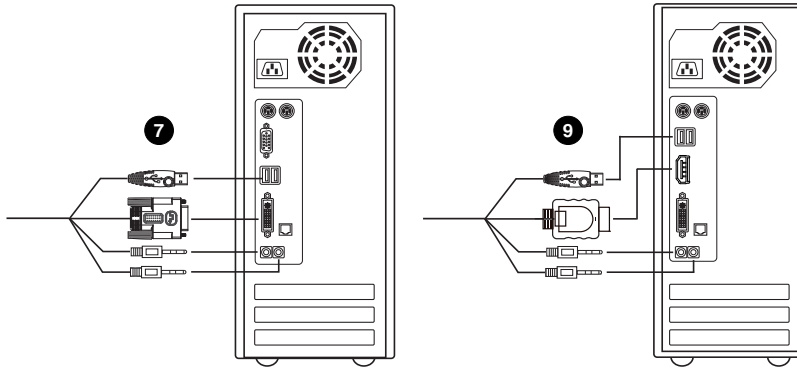
   Note: If the source of HD audio/video content is non-PC, such as a DVD player, a male-to-male HD audio/video cable can be used instead of the custom HD audio/video KVM cable set.

10. Plug your USB peripherals into the type A sockets (one easy-access port is located on the front for portable devices; the second is located on the rear).
11. Power on the displays.
12. Plug the power adapter that came with the CM0264 package into an AC power source, then plug the power adapter cable into the switch's power jack.
13. Power on the computers/devices.

    Note: The recommended power-on sequence is Port 1–Port 2–Port 3–Port 4. See *Default Display and Power On Sequence*, page 13, for further details

Installation Diagram





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Chapter 3
Basic Operation

Overview

There are four convenient methods to access the computers: manual, hotkey, Cursor Shift, and Matrix Windows in the Graphical User Interface (GUI). Manual operation involves pressing the Mode and port selection pushbuttons located on the unit's front panel. This is discussed in this chapter. Hotkey operation, which involves entering combinations from the keyboard, is discussed in Chapter 4. Port switching via Cursor Shift and Matrix Windows in the GUI are discussed in Chapter 5.

Default Display and Power On Sequence

The CM0264's default display is the DVI display. The first powered-on computer or device displays on the DVI display and has the default KVM focus. This means that, if an HD audio/video computer/device attached to Port 2, for example, is powered on first, it has the default KVM focus but displays on the DVI display*. Therefore, we recommend that your computers/devices are powered on in sequence, starting with the computer/device attached to Port 1 and ending with the computer/device attached to Port 4.

***** An HD audio/video computer/device displays video on a DVI display, but HD audio/video audio is not supported.

Non-PC Devices

Non-PC devices, such as DVD players, can only be accessed using the CM0264's front panel pushbuttons (see *Manual Switching*, page 15) or keyboard hotkeys (see *Port Switching*, page 21). Furthermore, as non-PC devices cannot have complete KVM focus (only video), see *Switching the Non-KVM Video*, page 18 for further details.

LED Display

The Mode and Port Selection Pushbuttons on the CM0264's front panel each have three corresponding LED icons that represent **audio**, **KVM1/V2**, and **USB.** These light green or orange, depending on status, as shown in the table, below:

Note: To ensure the LEDs display correctly, please follow the recommended power-on sequence. See *Default Display and Power On Sequence*, page 13, for details.

LED		Indication
Mode	KVM	◆ Lights BRIGHT ORANGE to indicate KVM1 is selected ◆ Lights BRIGHT GREEN to indicate V2 is selected
	Audio	◆ Lights BRIGHT GREEN to indicate Audio is selected
	USB	◆ Lights BRIGHT GREEN to indicate USB is selected
Port	KVM	◆ OFF to indicate port is not selected. ◆ Lights BRIGHT ORANGE to indicate that the computer attached its corresponding port has the KVM1 focus (and is showing on the DVI display). ◆ Lights BRIGHT GREEN to indicate that the computer attached to its corresponding port has the V2 focus (and is showing on the HD audio/video display). ◆ Flashes to indicate that the computer attached to its corresponding port is being accessed in Auto Scan Mode. ◆ All flash ORANGE to indicate that Firmware Upgrade mode has been invoked.
	Audio	◆ Lights BRIGHT GREEN to indicate that the computer attached to its corresponding port has the Audio focus.
	USB	◆ Lights BRIGHT GREEN to indicate that the computer attached to its corresponding port has the USB focus.

Note: 1. The Port Selection KVM icon is the port number (1, 2, 3, and 4).

2. **KVM1** refers to KVM focus via the current console display; **V2** refers to video only focus via the other console display.

Manual Switching

The Mode selection pushbutton and the pushbuttons that correspond to each port have three icons – **KVM, audio**, and **USB**. The icons on the Mode pushbutton light up when the Mode pushbutton is pressed to indicate cycling through the corresponding KVM, audio, and USB modes.

The icons on the port selection pushbuttons light up to indicate the current status of the computer that corresponds to that port. For example, if the audio icon is lit up above the port 3 selection pushbutton, this indicates that the computer attached to port 3 currently has the audio focus.

The CM0264 can be operated using one DVI Single Link console display or one DVI Single Link display and one HD audio/video console display. Manual switching differs slightly for each setup. For example, when using a single display console, there is a single KVM focus; when using a dual display console, there is one KVM focus (KVM1) and one further video focus (V2). See the following sections for details.

Single Display Console

- To bring complete focus (**audio, KVM, and USB**) to a computer, *either*, a) press the port selection pushbutton that corresponds to that computer; *or* b) press the Mode pushbutton **once** (the Mode pushbutton's three icons light up) and then press the port selection pushbutton that corresponds to that computer. All three port icons light up.
- To bring only the **KVM** focus to a computer, press the Mode pushbutton **twice** (the Mode pushbutton's KVM icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's KVM icon (the port number) lights up.
- To bring only the **audio** focus to a computer, press the Mode pushbutton **three times** (the Mode pushbutton's audio icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's audio icon lights up.
- To bring only the **USB** focus to a computer, press the Mode pushbutton **four times** (the Mode pushbutton's USB icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's USB icon lights up.

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- Press and hold port selection pushbuttons 1 and 2 simultaneously **for 2 seconds** to start Auto Scan Mode. See *Going Directly to a Port*, page 24 for details.

Note: Press and release either port selection pushbutton to stop Auto Scan Mode. The KVM focus goes to the computer attached to the corresponding port of the pushbutton you pressed.

- Press and hold port selection pushbuttons 3 and 4 simultaneously **for 2 seconds** to execute a KVM reset. See *KVM Reset*, page 19 for details.

Dual Display Console

In Dual Display Console mode, the CM0264 supports both a DVI and an HD audio/video display, and it is possible for either monitor to have the current KVM focus, while the other has video focus only. In following section, **KVM1** refers to KVM focus via the current console display; **V2** refers to video only focus on the other monitor.

Note: The KVM1 LED lights orange; the V2 LED lights green.

- To bring complete focus (**audio, KVM1 and USB**) to a computer, *either*, a) press the port selection pushbutton that corresponds to that computer; *or* b) press the Mode pushbutton **once** (the Mode pushbutton's three icons light up) and then press the port selection pushbutton that corresponds to that computer. All three port icons light up.
- To bring only the **KVM1** focus to a computer, press the Mode pushbutton **twice** (the Mode pushbutton's KVM icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's KVM icon (the port number) lights up.
- To bring only the **V2** focus to a computer, press the Mode pushbutton **three times** (the Mode pushbutton's KVM icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's KVM icon (the port number) lights up.
- To bring only the **audio** focus to a computer, press the Mode pushbutton **four times** (the Mode pushbutton's audio icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's audio icon lights up.
- To bring only the **USB** focus to a computer, press the Mode pushbutton **five times** (the Mode pushbutton's USB icon lights up), and then press the port selection pushbutton that corresponds to that computer. The port's USB icon lights up.
- Press and hold port selection pushbuttons 1 and 2 simultaneously **for 2 seconds** to start Auto Scan Mode, see *Auto Scanning*, page 26 for details.

  Note: Press and release either port selection pushbutton to stop Auto Scan Mode. The KVM focus goes to the port you pressed.

- Press and hold port selection pushbuttons 3 and 4 simultaneously **for 2 seconds** to execute a KVM reset. See *KVM Reset*, page 19 for details.

Switching the Non-KVM Video

In Dual Display Console mode (using one DVI monitor and one HD audio/video monitor), it is possible for either monitor to have the KVM1 focus. To switch the video source only on the other monitor (V2), use the hotkeys or front panel pushbuttons.

The V2 focus can be switched this way independently of the GUI. So use this method to switch the video of non-PC devices, such as DVD players.

When the current KVM focus is on either monitor, to switch the video on the other monitor, do the following:

- Use the **[Scroll Lock] [Scroll Lock] [V] [Enter]** hotkey; or
- Press the Mode pushbutton three times (the Mode pushbutton's KVM icon lights up), and then press the port selection pushbutton that corresponds to the source you wish to view.

See *Manual Switching*, page 15 or keyboard hotkeys (see *Port Switching*, page 21) for further details.

Hot Plugging

The CM0264 supports USB hot plugging – components can be removed and added back into the installation by unplugging their cables from the USB hub ports without the need to shut the unit down.

Powering Off and Restarting

If it becomes necessary to power off the unit, before starting it back up you must do the following:

1. Shut down all the computers that are attached to the switch.
2. Unplug the switch's power adapter cable.
3. Wait 10 seconds, then plug the switch's power adapter cable back in.
4. After the switch is up, Power On the computers.

KVM Reset

To reset your complete KVM installation to the factory default settings, press and hold Port Selection Pushbuttons 3 and 4 simultaneously for two seconds. Alternatively, run the remote-setup.exe file again (see *KVM Reset / Reinstallation*, page 61).

Port ID Numbering

Each KVM port on the CM0264 switch is assigned a port number (1, 2, 3, and 4). The port numbers are marked on the rear panel of the switch (see *Rear View*, page 7 for details).

The Port ID of a computer is derived from the KVM port number it is connected to. For example, a computer connected to KVM port 2 has a Port ID of 2.

The Port ID is used to specify which computer gets the KVM USB peripheral, and audio focus with the Hotkey port selection method (see *Going Directly to a Port*, page 22 for details).

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Chapter 4
Keyboard Port Operation

The CM0264 provides an extensive, easy-to-use hotkey function that makes it convenient to control and configure your KVM installation from the keyboard. Hotkeys provide independent switching of the KVM, USB hub and audio focus. You can give one computer the KVM console focus, another the USB hub focus, and the other two the audio focus, for example.

Port Switching

All port switches begin with tapping the **Scroll Lock** key twice. The tables om the following pages describe the actions that each combination performs, in both single and dual console display configurations. The CM0264 can be operated using one or two console displays. Port switching differs slightly for each setup. See the following sections for details.

Note: If using the Scroll Lock key conflicts with other programs running on the computer, the **Ctrl** key can be used, instead. See *Alternate HSM Invocation Keys*, page 27, for details.

Single Display Console

Cycling Through the Ports

Hotkey	Action
[Scroll Lock] [Scroll Lock] [Enter]	Brings the **KVM**, **USB hub**, and **audio** focus from the port that currently has the KVM focus to the next port on the installation (1 to 2; 2 to 3; 3 to 4; 4 to 1 for the CM0264).
[Scroll Lock] [Scroll Lock] **[K]** [Enter]	Brings only the **KVM** focus from the port that currently has it to the next port on the installation. The USB and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] **[U]** [Enter]	Brings only the **USB hub** focus from the port that currently has it to the next port on the installation. The KVM and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] **[S]** [Enter]	Brings only the **audio** focus from the port that currently has it to the next port on the installation. The KVM and USB hub focus remain where they are.

Going Directly to a Port

Hotkey	Action
[Scroll Lock] [Scroll Lock] **[n]** [Enter]	Brings the **KVM**, **USB hub**, and **audio** focus to the computer attached to the port corresponding to the specified Port ID.
[Scroll Lock] [Scroll Lock] **[n] [K]** [Enter]	Brings only the **KVM** focus to the computer attached to the specified port. The USB hub and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] **[n] [U]** [Enter]	Brings only the **USB hub** focus to the computer attached to the specified port. The KVM and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] **[n] [S]** [Enter]	Brings only the **audio** focus to the computer attached to the specified port. The KVM and USB hub focus remain where they are.
[Scroll Lock] [Scroll Lock] **[n] [K] [U]** [Enter]	Brings the **KVM** and **USB hub** focus to the computer attached to the specified port. The audio focus remains where it is.
[Scroll Lock] [Scroll Lock] **[n] [K] [S]** [Enter]	Brings the **KVM** and **audio** focus to the computer attached to the specified port. The USB hub focus remains where it is.
[Scroll Lock] [Scroll Lock] **[n] [U] [S]** [Enter]	Brings the **USB hub** and **audio** focus to the computer attached to the specified port. The KVM focus remains where it is.

Note: The **n** stands for the computer's Port ID number (1, 2, 3, or 4). See *KVM Reset*, page 19, for details. Replace the **n** with the appropriate Port ID when entering hotkey combinations.

Dual Display Console

For a dual-display console setup, please follow the recommended power-on sequence. See *Default Display and Power On Sequence*, page 13, for details.

In the following section, **KVM1** refers to KVM focus via the current console display; **V2** refers to video only focus via the other console display. The current display is the display that has the current KVM focus; the other display is the display that does not have the KVM focus.

Cycling Through the Ports

Hotkey	Action
[Scroll Lock] [Scroll Lock] [Enter]	Brings the **KVM1**, **USB hub**, and **audio** focus from the port that currently has the KVM focus to the next port on the installation (1 to 2; 2 to 3; 3 to 4; 4 to 1 for the CM0264). If the V2 focus is on the next port in the installation when this hotkey is used, the V2 focus switches with the original KVM1 focus. If the V2 focus is on any other port than the next one, it remains where it is. **Note:** Use this hotkey to cycle *complete control* via the current display through all the computers/devices .
[Scroll Lock] [Scroll Lock] **[K]** [Enter]	Brings only the **KVM1** focus from the port that currently has it to the next port on the installation. The V2, USB and audio focus remain where they are. **Note:** Use this hotkey to shift *KVM control* via the current display to the next computer/device.
[Scroll Lock] [Scroll Lock] **[V]** [Enter]	Brings only the **V2** focus from the port that currently has it to the next port on the installation. The KVM1, USB, and audio focus remain where they are. **Note:** Use this hotkey to shift *video* via the other display to the next computer/device.
[Scroll Lock] [Scroll Lock] **[U]** [Enter]	Brings only the **USB hub** focus from the port that currently has it to the next port on the installation. The KVM1, V2, and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] **[S]** [Enter]	Brings only the **audio** focus from the port that currently has it to the next port on the installation. The KVM1, V2, and USB hub focus remain where they are.

Going Directly to a Port

Hotkey	Action
[Scroll Lock] [Scroll Lock] **[n]** [Enter]	Brings the **KVM1**, **USB hub**, and **audio** focus to the computer attached to the specified port. If the V2 focus is on the specified port when this hotkey is used, the V2 focus switches with the original KVM1 focus. If the V2 focus is on any other port than the specified one, it remains where it is. **Note:** Use this hotkey to bring *complete control* via the current display to a specific computer/device.
[Scroll Lock] [Scroll Lock] **[n] [V] [S] [U]** [Enter]	Brings the **V2**, **USB hub**, and **audio** focus to the computer attached to the specified port. The KVM1 focus remains where it is. **Note:** Use this hotkey to bring *complete control* via the other display to a specific computer/device.
[Scroll Lock] [Scroll Lock] **[n] [K]** [Enter]	Brings only the **KVM1** focus to the computer attached to the specified port. The V2, USB hub, and audio focus remain where they are. **Note:** Use this hotkey to bring *KVM control* via the current display to a specific computer/device.
[Scroll Lock] [Scroll Lock] **[n] [V]** [Enter]	Brings only the **V2** focus to the computer attached to specified port. The KVM1, USB hub, and audio focus remain where they are. **Note:** Use this hotkey to bring *video* via the other display to a specific computer/device.
[Scroll Lock] [Scroll Lock] **[n] [U]** [Enter]	Brings only the **USB hub** focus to the computer attached to the specified port. The KVM1, V2, and audio focus remain where they are.
[Scroll Lock] [Scroll Lock] **[n] [S]** [Enter]	Brings only the **audio** focus to the computer attached to the specified port. The KVM1, V2, and USB hub focus remain where they are.
[Scroll Lock] [Scroll Lock] **[n] [K] [U]** [Enter]	Brings the **KVM1** and **USB hub** focus to the computer attached to the specified port. The V2 and Audio focus remain where they are. **Note:** Use this hotkey to bring *KVM and USB control* via the current display to a specific computer/device.
[Scroll Lock] [Scroll Lock] **[n] [V] [U]** [Enter]	Brings the **V2** and **USB hub** focus to the computer attached to the specified port. The KVM1 and Audio focus remain where they are. **Note:** Use this hotkey to bring *video and USB control* via the other display to a specific computer/device.

Hotkey	Action
[Scroll Lock] [Scroll Lock] **[n] [K] [S]** [Enter]	Brings the **KVM1** and **audio** focus to the computer attached to the specified port. The V2 and USB focus remain where they are.
[Scroll Lock] [Scroll Lock] **[n] [U] [S]** [Enter]	Brings the **USB hub** and **audio** focus to the computer attached to the specified port. The KVM1 and V2 focus remain where they are.

Note: The **n** stands for the computer's Port ID number (1, 2, 3, or 4). See *KVM Reset*, page 19, for details. Replace the **n** with the appropriate Port ID when entering hotkey combinations.

Auto Scanning

The CM0264's Auto Scan feature automatically cycles the KVM focus through the computer ports at regular intervals. This allows you to monitor the computer activity without having to take the trouble of switching from port to port manually. Although the video focus switches from port to port, the keyboard, mouse, and USB focus do not switch. They stay at the port they were on when Auto Scanning started. See the table below for details.

Hotkey	Action
[Scroll Lock] [Scroll Lock] [A] [Enter]	Invokes Auto Scan. The KVM focus cycles from port to port at **5 second intervals**. This is the Default setting.
[Scroll Lock] [Scroll Lock] [A] [n] [Enter]	The KVM focus cycles from port to port at **n** second intervals. **Note:** The **n** stands for the number of seconds that the CM0264 should dwell on a port before moving on to the next. Replace the **n** with a number between 1 and 99 when entering this hotkey combination.

When you use the port switching hotkey or HSM, the mouse cursor must be in the current computer display.

While Auto Scan Mode is in effect, ordinary keyboard and mouse functions are suspended – only Auto Scan Mode compliant keystrokes and mouse clicks can be input. You must exit Auto Scan Mode in order to regain normal control of the console.

Hotkey Setting Mode

Hotkey Setting Mode is used to set up your CM0264 switch configuration. All operations begin with invoking Hotkey Setting Mode (HSM).

Invoking HSM

To invoke HSM do the following:

1. Press and hold down **[Num Lock]**.
2. Press and release **[-]**.
3. Release **[Num Lock]**.

Note: There is an alternate key combination to invoke HSM. See below.

When HSM is active, the Caps Lock, and Scroll Lock LEDs flash in succession to indicate that HSM is in effect. They stop flashing and revert to normal status when you exit HSM.

Ordinary keyboard and mouse functions are suspended – only Hotkey compliant keystrokes and mouse clicks (described in the sections that follow), can be input.

At the conclusion of some hotkey operations, you automatically exit hotkey mode. With some operations, you must exit manually. To exit HSM manually, press the **Esc** key, or the **Spacebar**.

Alternate HSM Invocation Keys

An alternate set of HSM invocation keys is provided in case the default set conflicts with programs running on the computers.

To switch to the alternate HSM invocation set, do the following:

1. Invoke HSM (see page 27).
2. Press and release **[H]**.

   The HSM invocation keys become the Ctrl key (instead of Num Lock) and the F12 key (instead of minus).

This procedure is a toggle between the two methods. To revert back to the original HSM invocation keys, invoke HSM, then press and release the **H** key again.

Alternate Port Switching Keys

The port switching activation keys can be changed from tapping the Scroll Lock key twice ([Scroll Lock] [Scroll Lock]) to tapping the Ctrl key twice ([Ctrl] [Ctrl]). To change the port switching activation keys, do the following:

1. Invoke HSM (see page 27).
2. Press and release **[T]**.

This procedure is a toggle between the two methods. To revert back to the original [Scroll Lock] [Scroll Lock] method, invoke HSM, then press and release the **T** key again.

Keyboard Operating Platform

The CM0264's default port configuration is for a PC compatible keyboard operating platform. If your console uses a PC compatible keyboard and you have a Mac attached to a port, for example, you can change the port's keyboard operating platform configuration so that the PC compatible keyboard emulates the Mac keyboard. The procedure is as follows:

1. Bring the KVM focus to the port you want to set.
2. Invoke HSM (see page 27).
3. Press and release the appropriate Function key (see table below). After completing this procedure, you automatically exit HSM.

Function Key	Operation
[F2]	Enables Mac keyboard emulation, See p. 60, for details.
[F10]	Automatically detects and sets the keyboard operating platform.

Note: To set the keyboard language, see *Keyboard Language*, page 29.

List Switch Settings

To see a listing of the current switch settings, do the following:

1. Open a text editor or word processor and place the cursor in the page window.
2. Invoke HSM (see page 27).
3. Press and release **[F4]** to display the settings.

Note: This function can also be accessed through the CM0264's Graphical User Interface (GUI). See *Port Status*, page 35, for details.

USB Reset

If the USB loses focus and needs to be reset, do the following:

1. Invoke HSM (see page 27).
2. Press and release **[F5]**

Keyboard Language

To set the keyboard language to one of three presets, do the following:

1. Invoke HSM (see page 27).
2. Press and release **[F6] [nn] [Enter]**

Note: **nn** is a two-digit number that represents one of the following keyboard language codes: US English 33; French 08; Japanese 15.

Hotkey Buzzer Control

The Buzzer can be enabled or disabled. The default setting is enabled. To disable the buzzer, do the following:

1. Invoke HSM (see page 27).
2. Press and release **[B].**

This procedure is a toggle. Repeat to disable.

Port Switching Keys

The Port Switching Keys ([Scroll Lock] [Scroll Lock]/[Ctrl] [Ctrl]) can be enabled or disabled. The default setting is enabled. To disable, do the following:

1. Invoke HSM (see page 27).
2. Press **[X] [Enter]**.

This procedure is a toggle. Repeat to enable.

Firmware Upgrade Mode

To set the CM0264 to Firmware Upgrade Mode, do the following:

1. Invoke HSM (see page 27).
2. Key in: `upgrade`
3. Press **[Enter]**. The orange front panel LEDs flash to indicate Firmware Upgrade Mode is in effect.

Note: To exit Firmware Upgrade Mode, you must power off the switch. See *The Firmware Upgrade Utility*, page 47 for details.

Restore Default Settings

To reset the CM0264 to its default hotkey settings, do the following:

1. Invoke HSM (see page 27).
2. Press **[R] [Enter]**.

All hotkey settings return to the factory default settings.

Video DynaSync

Video DynaSync is ATEN's exclusive technology that eliminates boot-up display problems and optimizes resolution when switching between ports. To invoke Video DynaSync, do the following:

1. Invoke HSM (see page 27)
2. Press **[D]**

Note: When the monitor is disconnected and reconnected, the CM0264 executes Video DynaSync one more time.

Keyboard Emulation Control

Console keyboard port emulation/bypass feature supports most gaming/ multimedia keyboards. The default setting is enabled. To disable, do the following:

1. Invoke HSM (see page 27).
2. Press **[N]**.

This procedure is a toggle. Repeat to enable.

Note: When keyboard emulation is off, the [m], [w], [F2], [F4], [F5], [F6], and [F10] hotkeys are disabled. See page 32, for details.

Mouse Emulation Control

The default setting is enabled. To disable, do the following:

1. Invoke HSM (see page 27).
2. Press **[M]**.

This procedure is a toggle. Repeat to enable.

Cursor Shift Port Switching

When you are using two displays, the Cursor Shift function allows the mouse cursor to move back and forth across both displays, shifting the KVM focus (See *Cursor Shift*, page 44. for details). The default setting is disabled. To enable, do the following:

1. Invoke HSM (see page 27).
2. Press **[W]**.

This procedure is a toggle. Repeat to disable.

Note: This function is only available when mouse emulation and keyboard emulation are enabled.

SPC Mode

To set the keyboard/mouse to use SPC mode so that it can work under special operating systems as a standard (104 key) keyboard/mouse, do the following:

1. Invoke HSM (see page 27).
2. Press **[F1]**.

HSM Summary Table

Key	Function
[H]	Toggles between the default ([Num Lock] [-]) and alternate ([Ctrl] [F12]) HSM invocation keys.
[T]	Toggles between the default ([Scroll Lock] [Scroll Lock]) and alternate ([Ctrl] [Ctrl]) Port Switching keys.
[F1]	Sets the keyboard and mouse to SPC mode so that it can work under special operating systems as a standard (104 key) keyboard and mouse.
[F2]	Enables Mac keyboard emulation.
[F10]	Automatically detects and sets the keyboard operating platform.
[F4]	List the current switch settings via the paste function of a text editor.
[F5]	Performs a USB keyboard and mouse reset.
[F6] [nn] [Enter]	Sets the keyboard language. Note: nn is a two digit number that represents one of the following keyboard language codes: US English 33; French 08; Japanese 15.
[B]	Enables/disabled the buzzer.
[X] [Enter]	Enables/disables the port switching keys.
[R] [Enter]	Resets the hotkey settings to their default status.
[u][p][g][r][a][d][e] [Enter]	Invokes Firmware Upgrade Mode. See *The Firmware Upgrade Utility*, page 47 for full details.
[D]	Invokes Video DynaSync, ATEN's exclusive technology that eliminates boot-up display problems and optimizes resolution when switching between ports.
[N]	Enables/disables keyboard emulation.
[M]	Enables/disables mouse emulation.
[W]	Enables/disables cursor shift function. This is only available when using two displays. See *Cursor Shift*, page 44 for details.

Factory Default Hotkey Settings

For a full list of the CM0264's factory default hotkey settings, see *Factory Default Hotkeys and Settings*, page 64.

Chapter 5
GUI Operation

Overview

The CM0264 has Graphical User Interface (GUI) for convenient, user-friendly operation. The GUI provides port switching via mouse, file-transfer between PCs, easy monitoring, and other innovative desktop control functions.

The CM0264's GUI can be operated by Windows platforms only. However, other operating systems (Sun, Linux, Mac) can be viewed and accessed using the GUI's features. See *Operating Systems*, page 4.

The CM0264's GUI supports the display of computer operating systems only, so video content from a DVD player, for example, will not appear in the GUI. See *Non-PC Devices*, page 13.

Activating the GUI

Once your installation is connected up and powered on, the CM0264 appears as an ATEN external device in your computer's file system. To activate the GUI, do the following:

1. Click on the ATEN device in your file system and locate the CubiQ.exe file in the sub-menu.
2. Copy this file to a convenient location on all computers in your installation.
3. When you are ready to begin using the CM0264 , double-click the CubiQ.exe file on each PC to activate the GUI.

If you are using two console monitors, the connection window appears on both monitors. The monitor on which you first activate the GUI toolbar will be the monitor that has the GUI focus for that session.

If you have followed the recommended power on sequence (see *Default Display and Power On Sequence*, page 13), the DVI monitor will activate on Port 1, and the HD audio/video monitor will activate on Port 2. In any case, the Port number will display in the top left corner of the screen for three seconds (See illustration on page 43).

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Click on the CM0264 icon and the connection window appears, as below:

Click Connect to open up the GUI toolbar, which appears, as below:

Note: If you are experiencing problems with the GUI, perform a KVM reset (see *KVM Reset*, page 19) or reinstall the latest CM0264 software on all of your computers. Please see *KVM Reset / Reinstallation*, page 61 for details.

The Toolbar

The functions associated with each of the CM0264 toolbar icons are explained in the table below:

Icon	Function
	About – provides information about the CM0264, such as the current firmware version and copyright information.
	Hotkey List – provides a list of the CM0264 default hotkey settings. See *HSM Summary Table*, page 32 for a full list of CM0264 hotkeys and see also *Factory Default Hotkeys and Settings*, page 64 for a full list of default hotkey settings.
	List Switch Settings – provides information about the CM0264's port settings, such as the OS of the attached computers. This is the same function as the List Switch Settings hotkey. See *List Switch Settings*, page 29, for details.
	File Transfer – activates the CM0264's file management utility. See *The File Management Utility*, page 36, for a full explanation of the functions.
	Desktop Scaling – click here to synchronize the resolution of all attached computers/devices. See , page 43, for full details.
	Hide Matrix Windows – minimizes the Matrix Windows to an icon in the taskbar. Click the taskbar icon to restore. See *Port Switching via Matrix Windows*, page 43, for full details of the CM0264's Matrix Windows feature.
	Toolbar On/Off – minimizes the CM0264 toolbar to an icon in the taskbar. To view the toolbar, simply double click the taskbar icon.

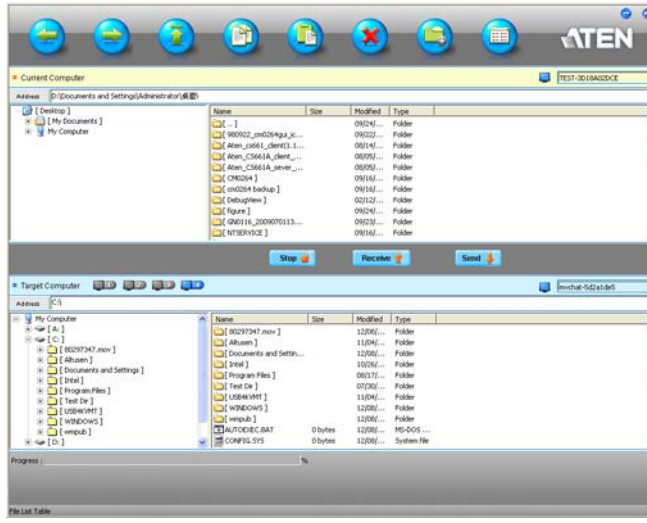
Note: The Toolbar can be moved to anywhere on your desktop. Simply click on the Toolbar's ***CubiQ***™ logo, and drag to a convenient location.

The File Management Utility

The CM0264 provides a complete file management utility that makes it quick and easy to transfer files between your computers. In addition to file transfer, the CM0264 file management utility also offers a full range of file system management features, such as creating, renaming, and deleting files and folders on all of the connected computers from one easy-to-use interface.

File Transfer GUI

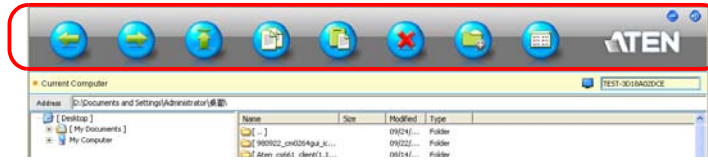
When you click on the File Transfer icon in the CM0264's toolbar (see *The Toolbar*, page 35), the utility's main page appears:



There are four main elements to the File Transfer GUI main page, as described on the following pages.

Toolbar

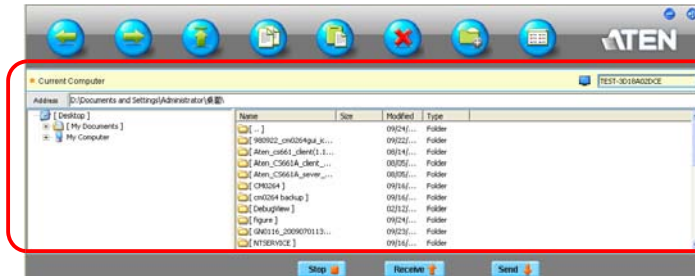
The Toolbar has eight main function icons across the top, and two navigation icons, as shown below:



Toolbar Icon	Name	Function
	Back	Click to go back
	Forward	Click to go forward
	Up	Click to take folder view up one level
	Copy	Highlight file(s) and click here to copy
	Paste	Highlight file(s)/folder(s) and click here to paste
	Delete	Highlight file(s)/folder(s) and click here to delete
	Create	Click to create a new folder in the currently active directory
	Detail	Click to toggle between the two file system view options – show folders only or show name, size, modified, and date.
	Minimize	Click to minimize the toolbar
	Exit	Click to exit the toolbar

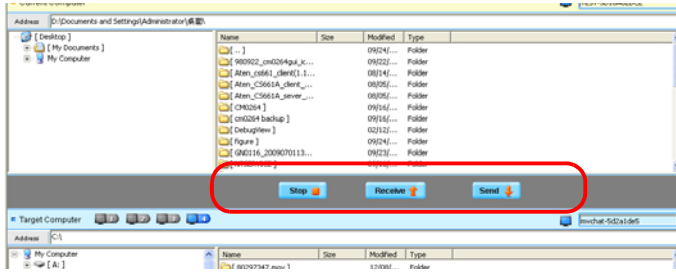
Current Computer Section

This section displays the file system of the computer with the current KVM focus.



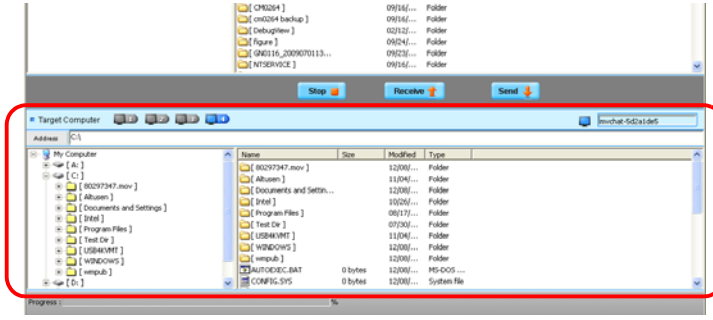
File Transfer Buttons

This section displays the three file transfer function buttons: Send, Receive, and Stop. See *Transferring Files*, page 39, for full details.



Target Computer Section

This section displays the file system of the computer that is currently selected as the target computer. It can be any of three computers that are not the current one, and is selected using the Target Computer buttons 1–4.



Transferring Files

To use the CM0264's file management utility to transfer files between up to four PCs, do the following:

1. In the Graphical User Interface (GUI) toolbar, click on the File Transfer icon (see *The Toolbar*, page 35) to activate the utility.
2. The File Transfer GUI main page opens (see *File Transfer GUI*, page 36 for a full description of the GUI features):
3. There are three methods of transferring files:

Drag and Drop

Select the destination computer in the Target Computer section, and then use your mouse cursor to highlight the destination folder. Then, simply click on the file(s) to be transferred, and drag and drop to the destination.

Send and Receive

Highlight both the file(s) to be transferred and the destination folder, then click the *Send* file transfer button to transfer a file from the current computer to the target computer, or the *Receive* file transfer button to transfer a file from the target computer to the current computer.

Copy and Paste

Highlight the file(s) to be transferred and click the *Copy* icon in the Toolbar. Then, simply move your cursor to the destination folder, and click on the *Paste* icon in the Toolbar.

4. File transfer can be halted at any time using the *Stop* button.
5. File transfer progress can be tracked in the Progress bar.

Other File Management Features

In addition to file transfer, the CM0264's file management utility also offers a full range of file management features, such as creating, renaming, and deleting files and folders on all of the connected computers. See *Toolbar*, page 37, for full details.

3n1 View Desktop Control and Monitoring

Matrix Windows

As a matrix KVM switch, the CM0264 allows you to monitor the video output of up to four PCs on up to two displays with its innovative 3n1 View desktop control and monitoring function. When the CM0264's GUI is operational, the desktop environment of up to three additional PCs appear in their own matrix windows. The default operation setting is the first powered-on computer's video output displayed fully with the video output of the other ports displayed vertically in smaller matrix windows to the right of the screen, as below:

The position and appearance of these matrix windows is fully customizable – they can be minimized/maximized, moved, and hidden. See the following pages for details.

Non-PC Devices

Only computer operating systems are displayed by the CM0264's 3n1 View function. If you have a non-PC device, such as a DVD player, connected to either HD audio/video port, for example, its display will not appear as a matrix window in the GUI. To switch to this non-PC display, use the unit's front panel pushbuttons (see *Manual Switching*, page 15) or keyboard hotkeys (see *Port Switching*, page 21).

Matrix Windows Display Sequence

The table below shows which ports are displayed in which matrix window when each of the ports is fully displayed:

Display Position	Port Number			
Full	1	2	3	4
Upper Matrix	2	1	1	1
Center Matrix	3	3	2	2
Lower Matrix	4	4	4	3

Basic Functions

Navigation

Navigating the matrix windows and moving them around in the CM0264's 3n1 View function is quick and easy, as follows:

- To bring a matrix window display to full screen:

  a) Double click the title bar or inside the matrix window of the display you wish to enlarge;

  b) Use the standard Windows maximize/minimize functions.

  Note: Maximizing the matrix window is a port switching function. Keyboard and mouse focus switch along with the video display. See *3n1 View Desktop Control and Monitoring*, page 40, for further details.

- To minimize all matrix windows, click the *Hide Matrix Windows* icon in the GUI's main toolbar.

  Note: The *Hide Matrix Windows* function hides all the matrix windows. Use the standard Windows maximize/minimize function to hide individual matrix windows.

- To move a matrix window, click on the window's toolbar and drag to a convenient location on your desktop.

Advanced Functions

Port Switching via Matrix Windows

To bring complete KVM focus to a particular port using the CM0264's *Matrix Windows* function, maximize that port's matrix window in one of three ways:

1. Double click the title bar of matrix window of the display;
2. Double click inside the matrix window of the display; or
3. Use the standard Windows Maximize/Minimize functions.

Methods 1 and 3 above perform a software-based port switch within the GUI; method 2 performs a full port switch. Operation may be slightly slower using the full port switch, depending on your computer's processor speed and RAM specifications. See *Hardware*, page 3.

Once the matrix window is maximized to full screen, all keyboard and mouse operations also switch to that port. Full KVM focus is maintained as long as the matrix window remains maximized. See also *Matrix Windows Display Sequence*, page 41.

To switch focus to another port, either maximize the matrix window of the target port, or, if the matrix windows have been hidden, use the GUI Toolbar to disable *Hide Matrix Windows* and then select your port.

For your reference, when you switch ports to different computers, the port number displays in the top left of the matrix window for three seconds:

Cursor Shift

The CM0264 offers dual display operation with one DVI display and one HD audio/video display. When two displays are being used at the console, your console mouse cursor can move across from one display to another. This is a port switching function: the display where the mouse cursor is positioned always has the KVM focus. This feature is only available when you are using a dual display console.

Before using Cursor Shift, cycle through the ports displayed in the matrix windows so the display you want to view on Display 2 is at the top, and ensure that the cursor shift function is enabled (see *Cursor Shift Port Switching*, page 31).

When the Cursor Shift is operated, the video output of the upper matrix window shifts between the two displays (and matrix windows) as shown above and described below:

- Cursor shifts from Display 1 (DVI; with matrix windows) to Display 2 (HD audio/video): Upper matrix window appears on Display 2; KVM focus switches to Display 2. See *Port Switching via Matrix Windows*, page 43, for details on the video display of the upper, center, and lower matrix windows.
- Cursor shifts from Display 2 (HD audio/video) to Display 1 (DVI): KVM focus returns to Display 1.

RTF Transfer Using CnP

The Rich Text Format (RTF) is a document file format developed by Microsoft for cross-platform document interchange. The CM0264's CnP function supports the copy and paste of RTF content across matrix windows. Copy the RTF content using the **[Ctrl]+[C]** hotkey. Next, press the **[Alt]+[V]** hotkey. Then, select the target computer and find the location for the RTF content to be pasted. Use the **[Ctrl]+[V]** hotkey.

Desktop Scaling

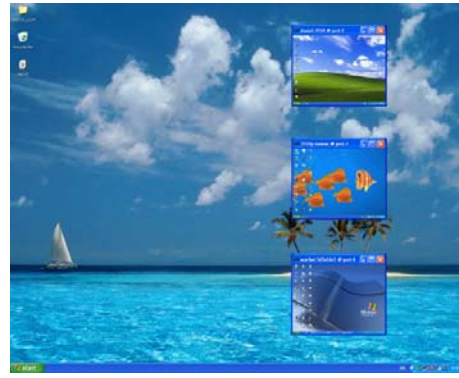
The CM0264's innovative desktop scaling feature offers the options of a full-screen or sizable (by ratio) matrix window. By default, the matrix windows maintain the original resolution of the computer screens and appear on the full screen desktop in a 1:1 aspect ratio. To match the resolution of the matrix windows to that of the current full screen computer display, click on the *Desktop Scaling* icon in the GUI main page toolbar (see *The Toolbar*, page 35).

Before

Before desktop scaling is invoked, the matrix windows appear in ratio to the resolution of the original screen, as below:

After

After desktop scaling is invoked, the ratio of the matrix windows match, as below:



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Chapter 6
The Firmware Upgrade Utility

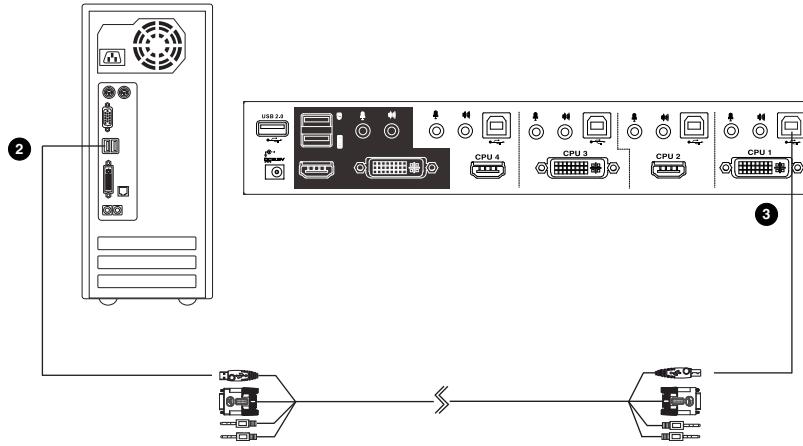
The Windows-based Firmware Upgrade Utility (FWUpgrade.exe) provides a smooth, automated process for upgrading the CM0264's firmware. New firmware upgrade packages are posted on our Website as new firmware revisions become available. Check the web site regularly to find the latest packages and information relating to them:

`http://www.aten.com`

Before you Begin

1. Disconnect your CM0264 installation. Go to our Internet support site and choose the CM0264 AP/Firmware Upgrade Package you want to install (usually the most recent), and download it to a computer.
2. Connect one of the KVM cable set's Type A USB connectors to a USB hub port on the computer with the Firmware Upgrade package.

Note: The illustration below shows the USB DVI KVM cable set for reference. The USB HD audio/video KVM cable set can also be used.



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3. At the other end of the KVM cable set, connect the USB Type B connector to the Type A USB port in the Port 1 KVM section.
4. Invoke Firmware Upgrade Mode (see *Firmware Upgrade Mode*, page 30). All the KVM LEDs flash orange to indicate that Firmware Upgrade Mode is in effect.

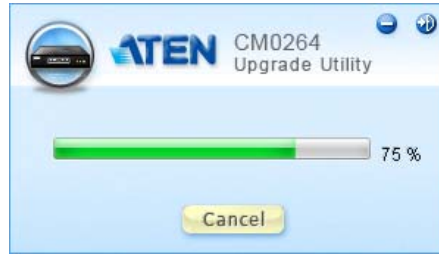
Starting the Upgrade

1. Run the downloaded AP/Firmware Upgrade Package file and follow the on-screen instructions to input customer information. Select "Complete" setup and install the USBXpress driver AP as instructed (see note on page 49), until the following window appears:

Click **Start** to execute the utility

Note: If a "Device Not Found" error message appears, check that the USB cables are connected properly.

2. Click **OK** in the next window that appears to confirm the upgrade. A new window with a progress bar appears (Click **Cancel** to cancel the upgrade).



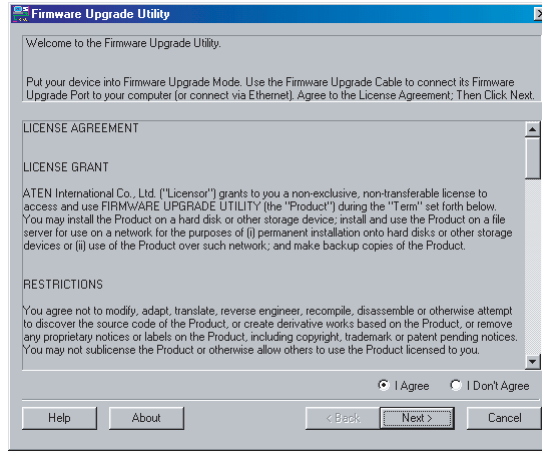
Note: Do not disconnect the USB cables while the utility is in operation.

3. When the AP upgrade has completed successfully; the following window appears:

4. Click **OK** to continue.

Note: The CM0264 GUI window appears. There is no need to click *Connect* – minimize this window.

The *Firmware Upgrade Utility* Welcome screen appears:


Firmware Upgrade Utility
Welcome to the Firmware Upgrade Utility.
Put your device into Firmware Upgrade Mode. Use the Firmware Upgrade Cable to connect its Firmware Upgrade Port to your computer (or connect via Ethernet). Agree to the License Agreement; Then Click Next.
LICENSE AGREEMENT
LICENSE GRANT
ATEN International Co., Ltd. ("Licensor") grants to you a non-exclusive, non-transferable license to access and use FIRMWARE UPGRADE UTILITY (the "Product") during the "Term" set forth below. You may install the Product on a hard disk or other storage device; install and use the Product on a file server for use on a network for the purposes of (i) permanent installation onto hard disks or other storage devices or (ii) use of the Product over such network; and make backup copies of the Product.
RESTRICTIONS
You agree not to modify, adapt, translate, reverse engineer, recompile, disassemble or otherwise attempt to discover the source code of the Product, or create derivative works based on the Product, or remove any proprietary notices or labels on the Product, including copyright, trademark or patent pending notices. You may not sublicense the Product or otherwise allow others to use the Product licensed to you.
I Agree
I Don't Agree
Help
About
< Back
Next >
Cancel

5. Read the License Agreement (enable the *I Agree* radio button), and click **Next**.

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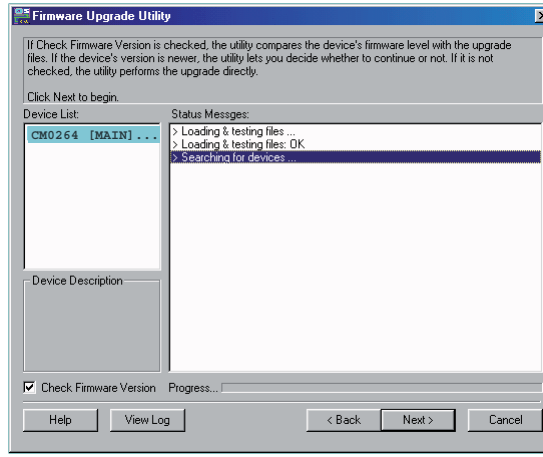
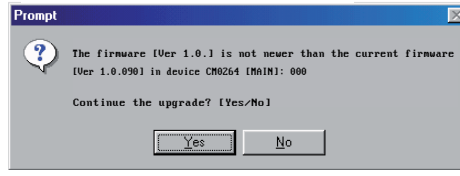
6. The Firmware Upgrade Utility main screen appears. The Utility inspects your installation. All the devices capable of being upgraded by the package are listed in the *Device List* panel.


Firmware Upgrade Utility
If Check Firmware Version is checked, the utility compares the device's firmware level with the upgrade files. If the device's version is newer, the utility lets you decide whether to continue or not. If it is not checked, the utility performs the upgrade directly.
Click Next to begin.
Device List:
CM0264 [MAIN]...
Status Messges:
> Loading & testing files ...
> Loading & testing files: OK
> Searching for devices ...
Device Description
Check Firmware Version
Progress...
Help
View Log
< Back
Next >
Cancel

7. As you select a device in the list, its description appears in the Device Description panel.After you have made your device selection, Click **Next** to perform the upgrade.

   If you enabled Check Firmware Version, the Utility compares the device's firmware level with that of the upgrade files. If the device's version is higher than the upgrade version, a dialog box gives you the option to **Continue** or **Cancel**:

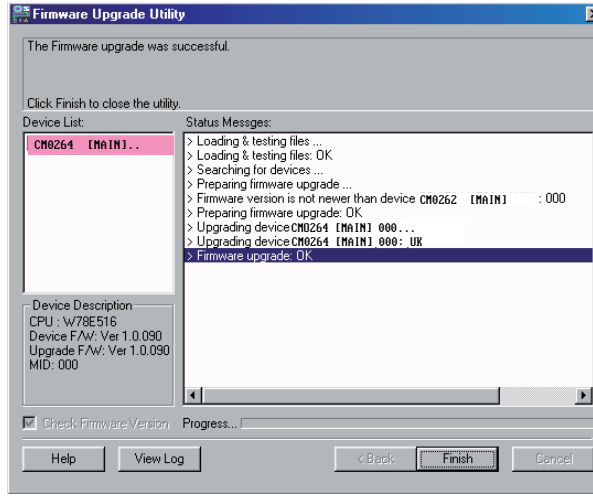

Prompt
The firmware [Ver 1.0.] is not newer than the current firmware [Ver 1.0.090] in device CM0264 [MAIN]: 000
Continue the upgrade? [Yes/No]
Yes
No

   If you didn't enable *Check Firmware Version*, the Utility installs the upgrade files without checking whether they are a higher level, or not.

   As the Upgrade proceeds status messages appear in the Status Messages panel, and the progress toward completion is shown on the *Progress* bar.

Upgrade Succeeded

After the upgrade has completed, a screen appears to inform you that the procedure was successful:



Click **Finish** to close the Firmware Upgrade Utility.

After a successful completion, the CM0264 exits Firmware Upgrade Mode, and resets itself.

Note: To remove the USBXpress AP driver, use Control Panel → Add/ Remove files.

Upgrade Failed

If the *Upgrade Succeeded* screen doesn't appear, it means that the upgrade failed to complete successfully, in which case you should do the following:

1. Power off the CM0264 by removing the power jack.
2. Invoke Firmware Upgrade Mode by holding down the front panel *Mode Selection* pushbutton (see *Components*, page 5) and power on the CM0264. The KVM LEDs flash orange together.
3. Do the firmware upgrade procedure again.

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Appendix

Safety Instructions

- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- The device is designed for IT power distribution systems with 230V phase-to-phase voltage.
- To prevent damage to your installation, it is important that all devices are properly grounded.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.

- If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or un-interruptible power supply (UPS).
- Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Technical Support

International

- For online technical support – including troubleshooting, documentation, and software updates: **http://support.aten.com**
- For telephone support, *Telephone Support*, page iii.

North America

Email Support		support@aten-usa.com
Online Technical Support	Troubleshooting Documentation Software Updates	http://www.aten-usa.com/support
Telephone Support		1-888-999-ATEN ext 4988

When you contact us, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase.
- Your computer configuration, including operating system, revision level, expansion cards, and software.
- Any error messages displayed at the time the error occurred.
- The sequence of operations that led up to the error.
- Any other information you feel may be of help.

Specifications

Function			CM0264
Computer Connections			4
Port Selection			Front Panel Pushbuttons; Hotkeys; GUI
Connectors	Console Ports	KB	1 x USB Type A Female (Black; rear panel)
		Video 1	1 x DVI-I Female (White)
		Video 2	1 x HD audio/video Type A Female (Black)
		Mouse	1 x USB Type A Female (Black; rear panel)
		Speaker	2 x Mini Stereo Jack Female (Green; 1 x front, 1 x rear)
		Mic.	2 x Mini Stereo Jack Female (Pink; 1 x front, 1 x rear)
	KVM Ports	KB/ Mouse	4 x USB Type B Female (White)
		Video	2 x HD audio/video Type A Female (Black); 2 x DVI-I Female (White)
		Speaker	4 x Mini Stereo Jack Female (Green)
		Mic.	4 x Mini Stereo Jack Female (Pink)
	Power		1 x DC Jack
	USB 2.0 Hub		2 x USB Type A Female (White; 1 x front panel; 1 x rear panel)
Switches	Selected		5 x Pushbutton
LEDs	KVM		5 (Orange/Green)
	Audio		5 (Green)
	USB		5 (Green)
Emulation	Keyboard / Mouse		USB
Video			1080p (HD audio/video) / 1920 x 1200 (DVI)
Scan Interval			1–99 secs. (Default: 5 secs)
Power Consumption			DC 5.3V, 10W
Environment	Operating Temp.		0–50ºC
	Storage Temp.		-20–60ºC
	Humidity		0–80% RH, Non-condensing
Physical Properties	Housing		Metal
	Weight		0.86 kg
	Dimensions (L x W x H)		26.00 x 7.50 x 4.50 cm

Troubleshooting

Operation problems can be due to a variety of causes. The first step in solving them is to make sure that all cables are securely attached and seated completely in their sockets. In addition, updating the product's firmware may solve problems that have been discovered and resolved since the prior version was released. If your product is not running the latest firmware version, we strongly recommend that you upgrade. See Chapter 6, **The Firmware Upgrade Utility**, for details.

Symptom	Possible Cause	Action
Mouse and/or Keyboard not responding.	Improper mouse and/or keyboard reset.	Unplug the cable(s) from the console port(s), then plug it/them back in.
	KVM switch needs to be reset.	Power off all devices on the installation (see safety note, page 9); power off the KVM switch; wait five seconds; then power up
USB devices not responding.	USB ports need to reset.	Unplug the device's USB cable from the USB port on the switch's rear panel, then plug it back in.
	PC or OS does not support USB 2.0.	The CM0264 has a built-in USB 2.0 hub, so does not support PCs or OS that do not support USB 2.0.
		For OS that do not support USB 2.0, keyboard and mouse functions can be reset using the [F1] hotkey function. See *SPC Mode*, page 31.
Device not recognized (Windows).	Windows timing problem.	Unplug the KVM cable from the computer's USB port; go into Windows' *System Settings* and remove the *Unknown Device* entry; plug the KVM cable back in. Windows now recognizes the device.
Cannot switch ports by pressing [Scroll Lock] twice	Keyboard is incompatible with Scroll Lock invocation.	Switch to the Alternate HSM invocation keys. See *Alternate HSM Invocation Keys*, page 27, for details.
Monitor does not display after KVM cable set is hot plugged.	Some HD audio/ video/DVI graphics cards are incompatible with cable set hot plugging.	Power off all devices on the installation (see safety note, page 9); power off the CM0264; confirm all KVM cables are properly connected; power on the CM0264; power on the computers

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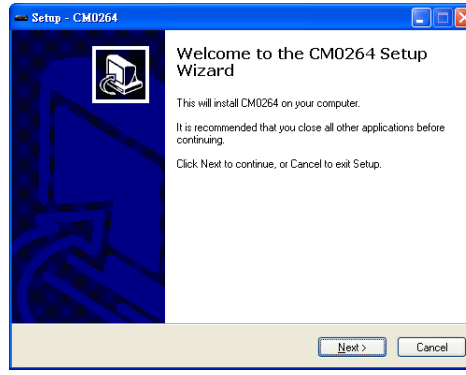
Symptom	Possible Cause	Action
When switching to an HD audio/ video computer, there is no display on the monitor.	Graphics card is DVI-I (Digital and Analog)	Adjust the graphics card settings to digital only.
		Replace graphics card with DVI-D or HD audio/video graphics card.
When switching ports, the monitor does not display.	Monitor is new or this is the first time installation.	Switch ports again and wait two or more seconds for the PC's EDID to pass to the monitor.
	The PC's EDID has not passed through to the monitor when switching ports	Use the [d] hotkey to invoke Video DynaSync one more time or switch to another PC to reconnect the CM0264. See *HSM Summary Table*, page 32.
Gaming keyboard connected to USB 2.0 peripheral port does not not work properly.	KVM hotkeys are not supported.	Toggle the Keyboard Emulation hotkey [N] off and on again. See *Mouse Emulation Control*, page 31. Keyboard emulation must be enabled to use all the keyboard's special keys.
Cannot find CubiQ software	The USB connection needs to be reset.	Disconnect the USB cables and reconnect them.
The GUI connection window stalls / does not connect	The CM0264 needs to be reset.	Perform a KVM reset or reinstall the latest CM0264 software on all your computers (see *KVM Reset / Reinstallation*, page 61)

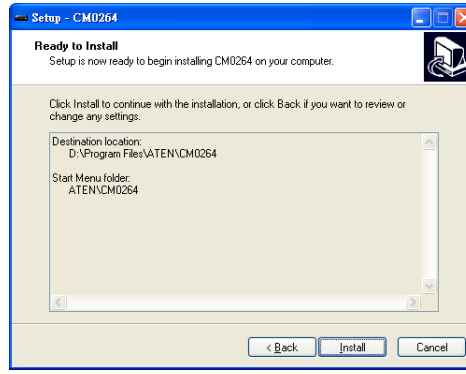
KVM Reset / Reinstallation

The CM0264 can be reset using the front panel pushbuttons (see *KVM Reset*, page 19) and by reinstalling the setup software. To perform a KVM reset via software, or reinstall the CM0264 on your computers, do the following:

1. Double click on the remote_setup.exe file. When the Welcome screen appears, click **Next**.


Setup - CM0264
Welcome to the CM0264 Setup Wizard
This will install CM0264 on your computer.
It is recommended that you close all other applications before continuing.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel

2. Follow the on-screen instructions to select a destination and select/edit the Start Menu Folder. When the Ready to Install screen appears, click **Install** to execute the installation:


Setup - CM0264
Ready to Install
Setup is now ready to begin installing CM0264 on your computer.
Click Install to continue with the installation, or click Back if you want to review or change any settings.
Destination location:
D:\Program Files\ATEN\CM0264
Start Menu folder:
ATEN\CM0264
< Back
Install
Cancel

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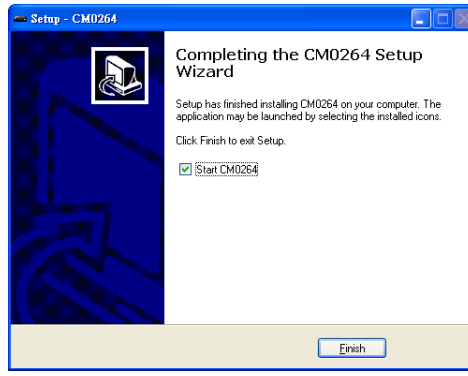
3. During the installation process, a progress bar appears. When the installation is complete, check the *Start CM0264* box and click **Finish**:


Setup - CM0264
Completing the CM0264 Setup Wizard
Setup has finished installing CM0264 on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Start CM0264
Finish

Mac Keyboard Emulation

The PC compatible (101/104 key) keyboard can emulate the functions of the Mac keyboard. The emulation mappings are listed in the table below.

PC Keyboard	Mac Keyboard
[Shift]	Shift
[Ctrl]	Ctrl
[Ctrl] [1]	
[Ctrl] [2]	
[Ctrl] [3]	
[Ctrl] [4]	
[Alt]	Alt
[Print Screen]	F13
[Scroll Lock]	F14
	=
[Enter]	Return
[Backspace]	Delete
[Insert]	Help
[Ctrl]	F15

Note: When using key combinations, press and release the first key (Ctrl), then press and release the activation key.

Factory Default Hotkeys and Settings

Setting	Hotkey	Default
Port Switching (Default / Alternate)	[T]	[Scroll Lock] [Scroll Lock]
Invoking HSM	[H]	[Number Lock] [-]
Auto Scan Interval	[Scroll Lock] [Scroll Lock] [A] [Enter]	5 seconds
Keyboard Operating Platform	[F10]	PC Compatible
Mouse Emulation	[M]	Enabled
Keyboard Emulation	[N]	Enabled
Cursor Shift Function	[W]	Disabled
Port Switching Keys (On / Off)	[X] [Enter]	Enabled
Buzzer	[B]	Enabled
Keyboard Language	[F6] [nn] [Enter] Note: **nn** is the language number	English

Limited Warranty

IN NO EVENT SHALL THE DIRECT VENDOR'S LIABILITY EXCEED THE PRICE PAID FOR THE PRODUCT FROM DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THE PRODUCT, DISK, OR ITS DOCUMENTATION.

The direct vendor makes no warranty or representation, expressed, implied, or statutory with respect to the contents or use of this documentation, and especially disclaims its quality, performance, merchantability, or fitness for any particular purpose.

The direct vendor also reserves the right to revise or update the device or documentation without obligation to notify any individual or entity of such revisions, or update. For further inquiries, please contact your direct vendor.

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